

Groundwater Vulnerability Study Using drastic method In Semarang City Urban Area

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Abstract

Water resource represent one of important resource to human life in conducting various including development activity. Vulnerability at the moment represent problem of which not only limited in industrial state, but also extend developing countries, where industry grow fast at the same time at the height of amount of urbanization and resident to metropolis.

Method of DRASTIC is method using various parameter hidrogeology to know susceptance level groundwater in local area. This parameter have different burden value according to is big influence in conducting skoring. Method DRASTIC use parameter deepness water table groundwater, amount recharge, aquifer type, soil type, topography, impact unsatiated zona, and hydraulic conductivity. To determine susceptance level of groundwater is suming score value of each used parameter. The value can be used to determine susceptance level of groundwater in area.

Research area located in area of Semarang cover Semarang East, Middle Semarang and Semarang North. Having taken steps Correlation well drilling data and data geolistrik can know condition of geology and his hidrostratigrafy. Condition area geology Semarang have morphology in the form of lowland and litology in the form clayed sands until sandy clay which have association to other one another. There are breksi at part in south research area. Research area there are three condition of hidrostratigrafy that is aquifer, aquitar and aquifug.

Result analysis with this method got three susceptance level groundwater to contamination, that is susceptance area groundwater middle, high and very high. Mitigasi can be technical and non is technical. Technical method can be naturally by reboisation especially in recharge area, and conservation groundwater can be improving infiltration in the ground. Brand method medium can be admission filling of groundwater admission recharge area, making of diffusion area groundwater and making diffusion well. The importance law enforcement to arrange problems about groundwater.

Keywords : DRASTIC, urban, semarang, vulnerability, contamination